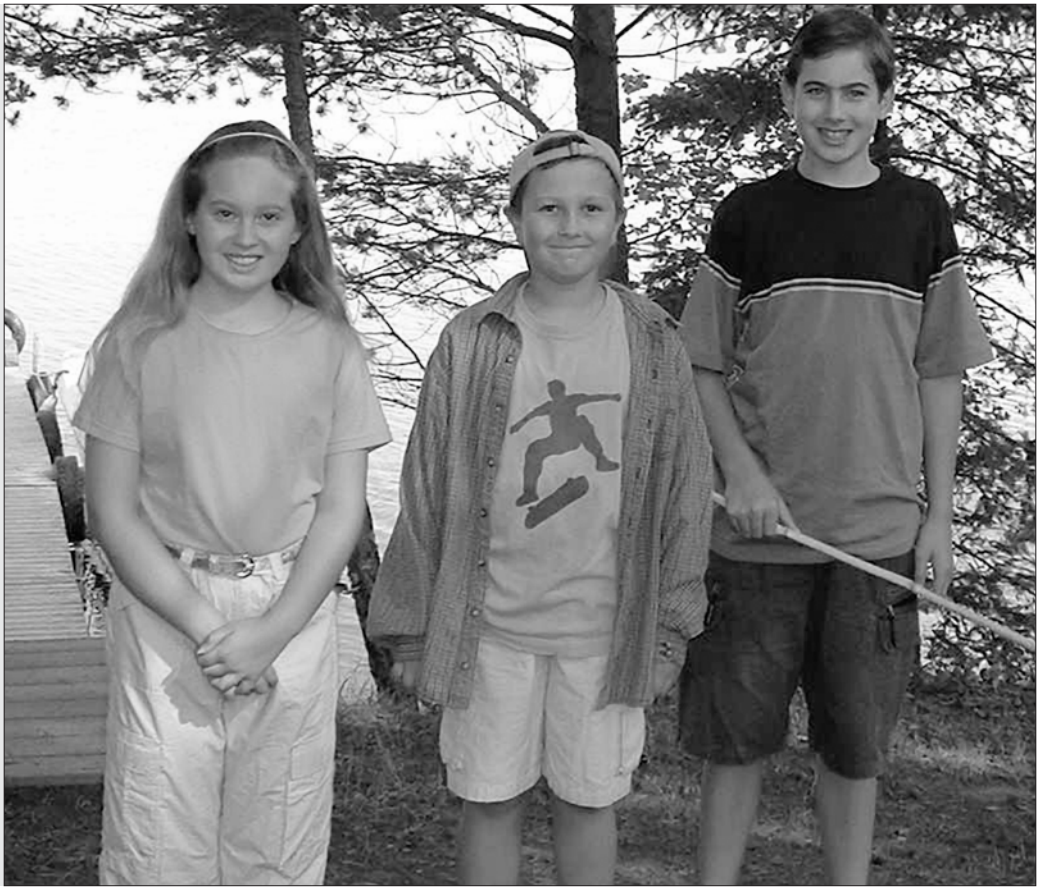
Health Status

The systematic assessment of the health status of infants, children, and adolescents allows health professionals to gauge the impact of past and current health intervention and prevention programs. Program planners and policymakers can identify trends by examining and comparing data from one year to the next. Although indicators are often assessed on an annual basis, some surveillance systems collect data at intervals, such as every 2, 3, or 5 years.

In the following section, mortality, disease, injury, and health behavior indicators are presented by age group. The health status indicators in this section are based on vital statistics and National surveys. Population-based samples are designed to yield information that is representative of the maternal and child populations that are affected by, or in need of, specific health services.



Health Status - Infants

BREASTFEEDING

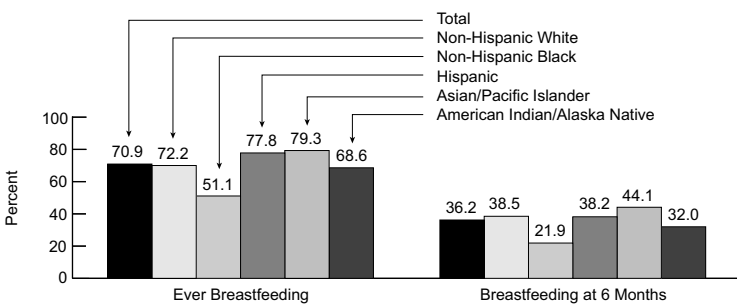
Breastfeeding has been shown to promote the health and development of infants, as well as their immunity to disease; it has also been shown to have a number of benefits to maternal health. For this reason, the American Academy of Pediatrics (AAP) recommends exclusive breastfeeding—without supplemental foods or liquids—through the first 6 months of age and continued breastfeeding through at least the first year.

Breastfeeding initiation rates in the United States have fluctuated over the past several decades but have increased steadily since the beginning of the 1990s. In 2003, 70.9 percent of mothers ever breastfed their infants. Asian women were most likely to breastfeed their infants (79.3 percent), followed by Hispanic and non-Hispanic White women (77.8 and 72.2 percent, respectively). Breastfeeding rates increased with maternal age, higher educational achievement and higher income. Married women were more likely than unmarried women to breastfeed (76.8 versus 57.8 percent, respectively).

Breastfeeding rates decrease as infant age increases. In 2003, 36.2 percent of mothers breastfed their infants at 6 months, and 17.2 percent breastfed at 12 months. Exclusive breastfeeding rates have not shown the same improvement over time as breastfeeding initiation. In 2003, only 14.2 percent of women practiced exclusive breastfeeding at 6 months. As with breastfeeding initiation, exclusive breastfeeding rates were higher among Asian, Hispanic, and non-Hispanic White women, and women who were older, educated, and of higher income.

Breastfeeding* Rates, by Race/Ethnicity: 2003

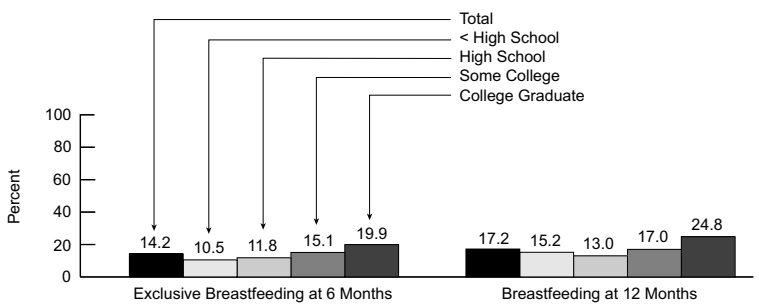
Source (II.1): Centers for Disease Control and Prevention, National Immunization Survey



*Includes exclusive and supplemental breastfeeding.

Breastfeeding Rates, by Recommended Duration* and Maternal Education: 2003

Source (II.1): Centers for Disease Control and Prevention, National Immunization Survey



*The American Academy of Pediatrics recommends exclusive breastfeeding through 6 months of age, and continued supplemental breastfeeding through 1 year.

LOW BIRTH WEIGHT

In 2003, 324,064 infants were born at low birth weight (less than 2,500 grams, or 5 pounds 8 ounces); this represented 7.9 percent of all live births. The percentage of newborns born at low birth weight has risen steadily from a low of 6.7 percent in 1984 and is currently at the highest level recorded in the past three decades.

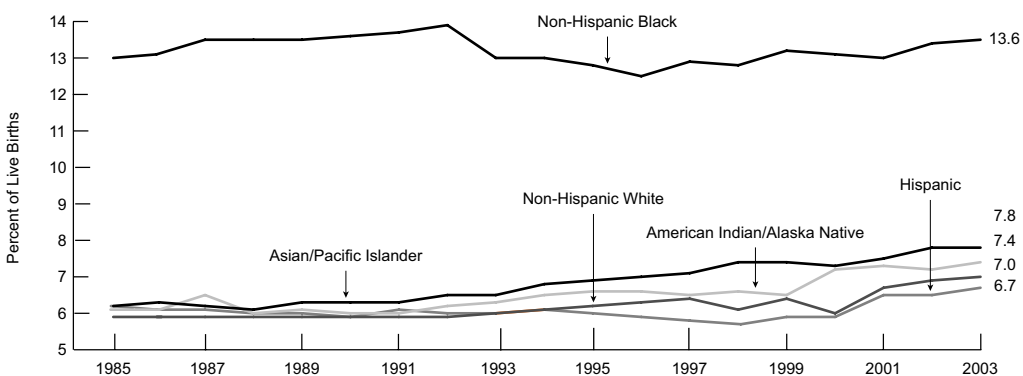
Low birth weight rates differ by maternal age, with mothers younger than 15 and older than 45 years of age most likely to deliver low birth weight infants. Much of the incidence of low birth weight among older mothers is due to an increase in the proportion of multiple births. Multiple births are much more likely to be low birth weight than are singletons: in 2003, 58.2 percent of all multiple births were low birth weight. The increased frequency of multiple births among older mothers is largely due to the increasing use of assisted reproductive technologies and the fact that older mothers are also more likely than younger mothers to conceive multiples naturally. Although the increase in multiple births is a contributing factor to the increase in low birth weight rates, low birth weight also increased among singleton deliveries.

The low birth weight rate among non-Hispanic Black infants (13.6 percent) has not declined significantly since 1991. The rates among non-Hispanic White and Hispanic infants were considerably lower in 2003 (7.0 and 6.7 percent, respectively). The rate of low birth weight among infants born to smokers was substantially higher than among nonsmokers (12.4 versus 7.7 percent) in 2003. This significant differential has been consistently observed among both non-Hispanic Black and non-Hispanic White infants. Other factors associated with increased risk of low birth weight include maternal poverty and low levels of educational attainment.

Low birth weight is one of the leading causes of neonatal mortality. Low birth weight infants are more likely to experience long-term disability or to die during the first year of life than are infants of normal weight.

Low Birth Weight Among Infants, by Race/Ethnicity: 1985-2003*

Source (I.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



1985-88 data are based on the race of the infant; data after 1989 are based on the race of the mother.

VERY LOW BIRTH WEIGHT

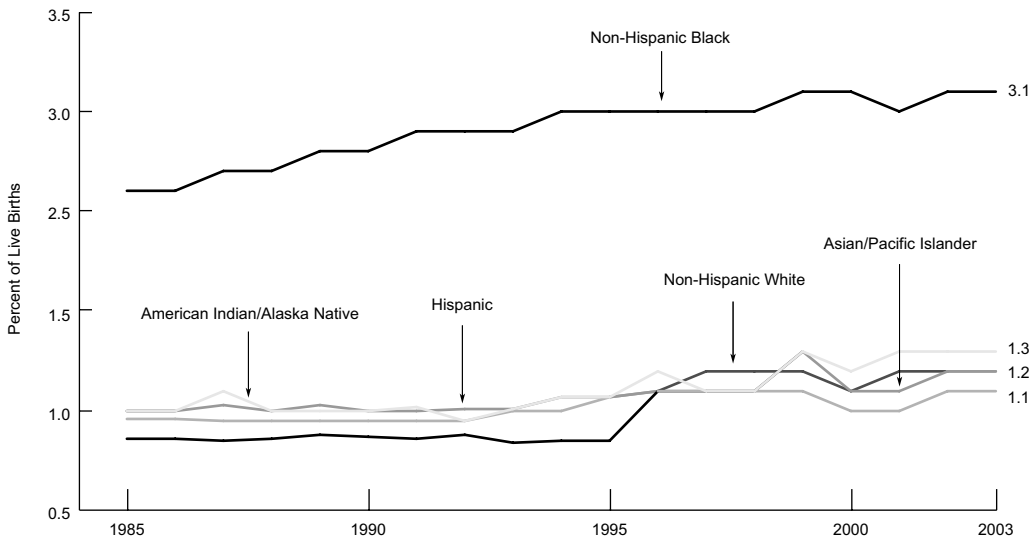
In 2003, 1.4 percent of live births were infants of very low birth weight (less than 1,500 grams, or 3 pounds 4 ounces). This has slowly climbed from a rate of just over one percent in 1980.

Because the chance of survival increases as birth weight increases, very low birth weight infants have the lowest survival rates. Infants born at such low birth weights are approximately 100 times more likely to die in the first year of life than are infants of normal birth weight. Very low birth weight infants who survive are at a significantly increased risk of severe problems, including physical and visual difficulties, developmental delays, and cognitive impairment requiring increased levels of medical, educational, and parental care.

The overall rate of very low birth weight among non-Hispanic Black newborns (3.1 percent) is over two and a half times greater than the rate among most other racial and ethnic groups, including non-Hispanic Whites (1.2 percent), Hispanics (1.2 percent), and Asian/Pacific Islanders (1.1 percent). This difference is a major contributor to the disparity in infant mortality rates between non-Hispanic Black infants and infants of other racial and ethnic groups.

Very Low Birth Weight Among Infants, by Race/Ethnicity: 1985-2003

Source (I.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



NEONATAL AND POSTNEONATAL MORTALITY

Neonatal. In 2003, 19,108 infants died before reaching 28 days of age, representing a neonatal mortality rate of 4.7 deaths per 1,000 live births. This rate is unchanged from the previous year.

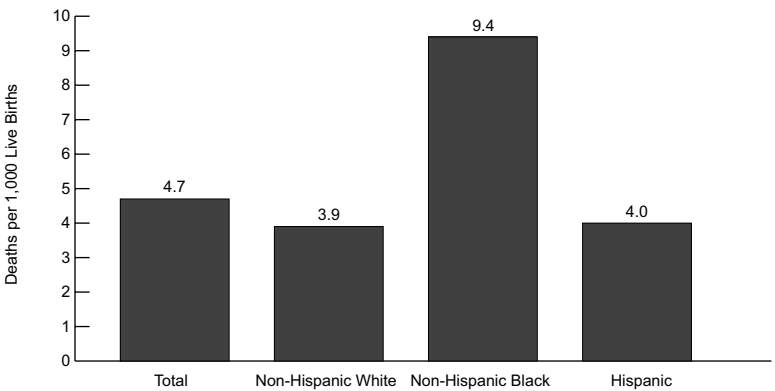
Neonatal mortality is generally related to short gestation and low birth weight, congenital malformations, and conditions occurring in the perinatal period.

Postneonatal. In 2003, 9,320 infants died between the ages of 28 days and 1 year, representing a postneonatal mortality rate of 2.3 deaths per 1,000 live births. This rate is unchanged from the previous year.

Postneonatal mortality is generally related to Sudden Infant Death Syndrome (SIDS), congenital malformations, and unintentional injuries.

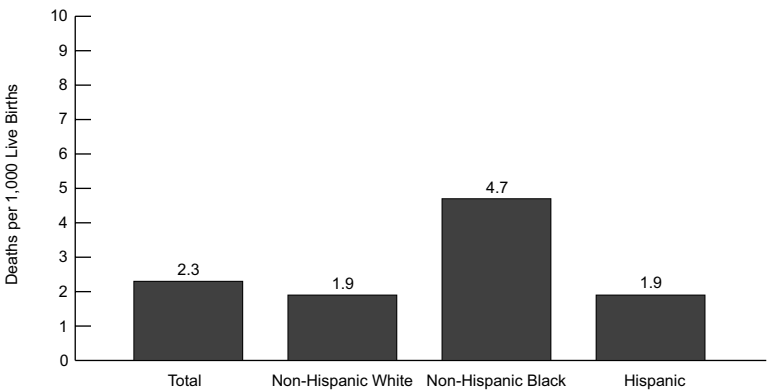
Neonatal Mortality Rates, by Maternal Race/Ethnicity: 2003

Source (II.2): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



Postneonatal Mortality Rates, by Maternal Race/Ethnicity: 2003

Source (II.2): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



MATERNAL MORTALITY

During the past several decades, the rate of maternal mortality in the United States has declined dramatically. However, the rate in 2003 (12.1 per 100,000 live births) was significantly different from the rate reported in 2002 (8.9 per 100,000). This may partly be due to a change in how pregnancy is recorded on death certificates.

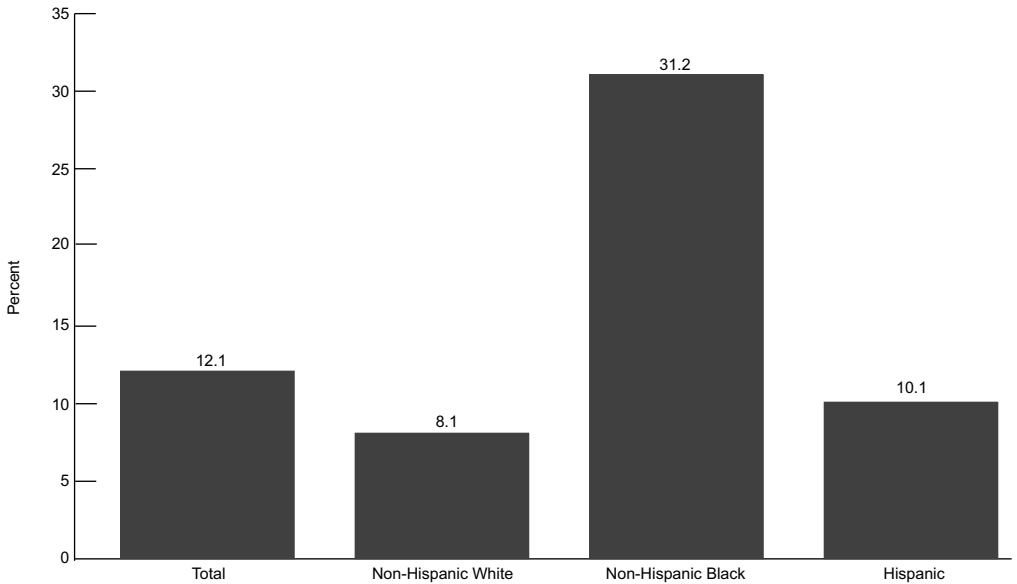
Overall, there were 495 maternal deaths resulting from complications during pregnancy, childbirth, or up to 42 days postpartum in 2003. The maternal mortality rate among non-Hispanic Black women (31.2 per 100,000 live births) is about four times the rate among non-Hispanic White women (8.1 per 100,000 live births). This disparity has widened since 2000.

According to the National Center for Health Statistics, the risk of maternal death increases for women over age 30, regardless of race. Women ages 35 to 39 years have over three times the risk of maternal death as women ages 20 to 24 years.[1]

1 *National Center for Health Statistics. Health, United States, 2004. Hyattsville, Maryland: 2004.*

Maternal Mortality Rates, by Race/Ethnicity: 2003

Source: (II.2): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



INFANT MORTALITY

In 2003, 28,428 infants died before their first birthday, representing an infant mortality rate of 6.9 deaths per 1,000 live births. The leading cause of infant mortality was congenital malformations, deformations and chromosomal abnormalities, which accounted for 20 percent of infant deaths.

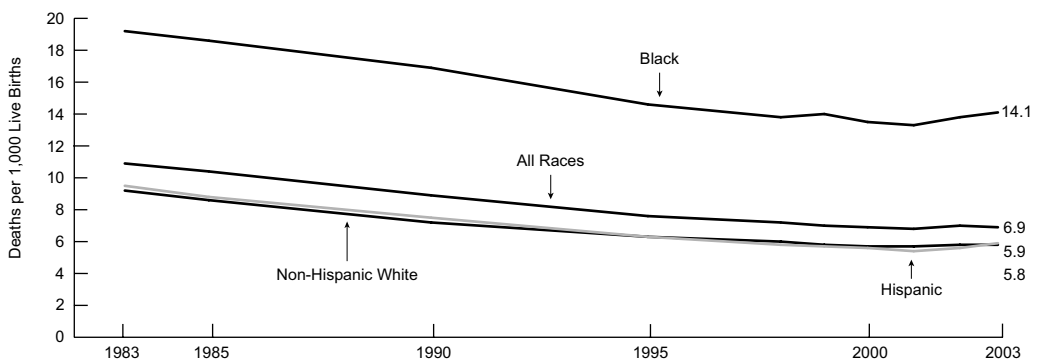
The infant mortality rate declined from the 1960s into this century, but increased slightly between 2001 and 2002. This was largely due to an increase in the percentage of infants born weighing less than 750 grams, reasons for which include a rise in both preterm and multiple births. The rapid decline in infant mortality that began in the mid-1960s slowed among both Blacks and Whites during the 1980s. Major advances, including the approval of synthetic surfactants and the recommendation that infants be placed on their backs when sleeping, may have contributed to a renewed decline during the 1990s.

Based on preliminary data, the mortality rate among Black infants was 14.1 infant deaths per 1,000 live births in 2003. This is almost two and one-half times the rate among non-Hispanic White infants (5.8 per 1,000 live births). Although the trend in infant mortality rates among both Blacks and non-Hispanic Whites has generally declined throughout the last century, the proportional discrepancy in rates between the two races remains largely unchanged.

The Maternal and Child Health Block Grant and the MCHB's Healthy Start Program provide health and support services to pregnant women and infants with the goal of reducing infant mortality rates.

U.S. Mortality Rates Among Infants,* by Maternal Race/Ethnicity: 1997-2003

Source (II.2): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



*Under 1 year of age.

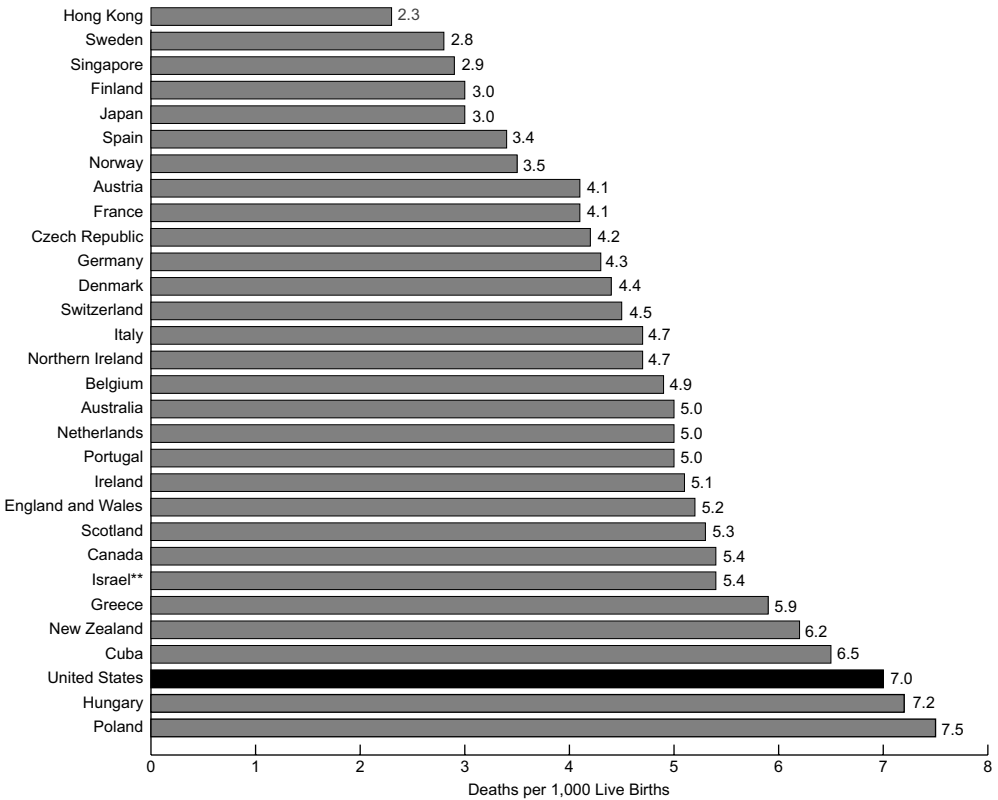
INTERNATIONAL INFANT MORTALITY RATES

Although the United States has substantially reduced its infant mortality rate in recent decades, it was still ranked below many industrialized nations in 2002 with a rate of 7.0 deaths per 1,000 live births. This represents a slight increase from the rates of 6.9 and 6.8 per 1,000 in 2000 and 2001, respectively, but is well below the rate of 26.0 per 1,000 reported in 1960. Differences in infant mortality rates among industrialized nations may reflect disparities in the health status of women before and during pregnancy, as well as the quality and accessibility of primary care for pregnant women and their infants. However, some of these differences may, in part, be the result of international variation in the definition, reporting, and measurement of infant mortality.

According to data reported by individual countries, seven industrialized countries or territories had infant mortality rates that were half the rate of the United States or less. Hong Kong had the lowest rate (2.3 per 1,000), followed by Sweden (2.8 per 1,000). Overall, the United States was ranked 28th in the world.

International Infant Mortality Rates:* 2002

Source (II.3): Centers for Disease Control and Prevention, National Center for Health Statistics



*Includes countries, territories, cities, or geographic areas with at least 1 million population and with "complete" counts of live births and infant deaths as indicated in the United Nations Demographic Yearbook. Some of the variation in infant mortality rates is due to differences among countries in distinguishing between fetal and infant deaths.**Includes data for East Jerusalem and Israeli residents in certain other territories under occupation by Israeli military forces since June 1967.